



# PROJECT NEWSLETTER



## Status Summary

The new Seadrill-Sevan Louisiana drill rig is continuing its transit to the Gulf of Mexico with commissioning activities happening along the way.

Note the key dates in the hull fabrication section. The hull is scheduled to launch on March 15<sup>th</sup>, and two weeks after that, it will be loaded onto a transport vessel. Transit time from Hyundai's Yard in South Korea to Kiewit's Yard in south Texas is approximately 60 days.

The upper and lower levels of the production deck are in place being mated together. The main deck is evolving rapidly as equipment is being set in place almost as soon as it arrives at Kiewit. It is looking more like the final product every day.

Production Systems Engineering is winding down as most design tasks are complete and drawings have been issued for construction. The list of Owner Furnished Equipment (OFE) that is under construction continues to decrease as these offsite skids are completed and shipped to Kiewit for integration onto the deck.

A significant regulatory permit that is key to the overall project development has been approved. The Development Operations Coordination Document (DOCD) was approved on February 6<sup>th</sup>. Congratulations to everyone involved in the preparation and subsequent approval of this permit.

## Drilling & Completions

Progress continues on the two new DP Deepwater rigs coming to LLOG to work on the Delta House wells. The Sevan Louisiana is actually the Seadrill-Sevan Louisiana, now that Seadrill has taken over rig management and operations from Sevan. The Sevan organization will continue to hold the rig contract; however, all rig staff, management and management systems operating the rig will be Seadrill. The end result is LLOG will have only one drilling contractor to interface with for all the Delta House wells going forward. We see this as a positive, and feel there are benefits to having a single LLOG-Seadrill Team to drill and complete all the Delta House wells going forward.

The Louisiana is enroute to the Gulf of Mexico. The next stop is Walvis Bay, Namibia on the west coast of Africa. After Walvis Bay, we will hook up the blow out preventer (BOP) to the drilling riser deployment system and "splash the BOPS" to ensure the systems are functional prior to continuing our mobilization to the Gulf of Mexico (GOM). Next, the Louisiana will stop in Curacao, located in the Southern Caribbean, where we will take on fuel, supplies, and remaining rig equipment. After a short 9-10 day journey from Curacao, we should be in the Gulf of Mexico. The remaining rig Integrated Activity Testing (IAT) will take place in the GOM at the Malachite well location in the Delta House field. We will deploy the BOPs on Malachite, and function test the subsea systems and emergency disconnect protocols. By early to mid-May, we expect to move to MC 79 and drill a well to TD, followed by two Delta House wells for a drill and complete cycle on each well.

### Inside This Issue:

Hull Fabrication	2
Production Deck Fabrication	3
Production Systems Engineering	4
Production Equipment Fabrication	4
Subsea Systems & Pipelines Engineering	5



Sevan Louisiana

## Drilling and Completions Continued...

The Seadrill West Neptune is the second Delta House program rig. The Neptune is a dynamically positioned drill ship being built at Samsung Heavy Industries Shipyard (SHI) in Geoje City, South Korea. SHI is the 2nd busiest shipyard in the world, second only to Hyundai Heavy Industries in South Korea. SHI employs 45,000 people. SHI is currently building 24 ships (all at the same time)!

The Seadrill West Neptune is 748 ft. long and 138 ft. wide and can accommodate up to 200 persons. The drill ship has a dual activity derrick and comes with two complete BOP Stacks rated for 15,000 psi. The Seadrill West Neptune can drill in water depths up to 12,000 ft. to a maximum drilling depth of 37,500 ft.

The Seadrill West Neptune is due to be delivered by SHI in July 2014. Following transit from South Korea to GOM, it will commence operations in the GOM in October 2014. The initial work scope will be the completion of 6 Delta House wells.



West Neptune

## Hull Fabrication



- HHI has expended 645,147 man hours to date. Overall construction progress is 92.5%
- Major Events:

Steel Cutting	March 4, 2013
Keel Laying	July 15, 2013
Flooding of Hull	November 19, 2013
Launching	March 15, 2014
Ready for Sail Away	March 21, 2014
- Installation of equipment is on-going for riser adapters, mooring turn down sheaves, chain stoppers, Hawse pipe closures
- Fairleader installation is now complete
- Messenger chain marking is on-going
- Shore Power has connected to all columns
- MCC commissioning has been completed
- Mechanical Completion and Pre-commissioning is ongoing
- Tank testing is on-going
- Sump tanks, caissons, riser piping are being installed
- Sea Fastenings are installed
- Pre-Load out meeting at HHI site office with Dockwise, Matthew Daniels, towing company, Exmar and LLOG.



Current Hull Status



- The lower and upper levels are all in place. Some fitting and welding remains to be done between sections and is currently in progress. Equipment installation continues and pipe spools are being installed on all levels. Cable tray installation is still in progress on all levels. Grating and deck plate installation is progressing on both levels.
- The East Seatrax Crane has been assembled and is ready for installation on the deck. Assembly of the West Crane has started.
- Machining of the sole plates for the generators and compressors has been completed and the equipment has been re-installed on the deck.
- The mezzanine level of the production module has been set and installation of pipe spools continues.
- Installing the duct work on the compression module and installing pipe spools.
- The pipeline pump skid valve access platform has been pre-assembled on the ground. Grating and handrails have been installed and presently installing pipe supports.
- The generation module has been painted and flipped upside down for the installation of the legs and braces. Once the welding was completed, the module was flipped right side up and started installing pipe supports.
- Both crane access platforms have been fabricated, handrails installed and painted out. The East crane access platform is being installed on the pedestal.
- The crane pedestals have been painted out.
- Installation of pipe spools and cable tray in the pipe racks continues.
- The MCC building has been set on the upper level which now opens work for the electricians to start pulling electrical cables.
- Since last month's report, the following equipment has been set on the deck: Heat Media Skid, Chemical Injection Skid, 3 Pipeline Pumps, Fuel Gas Skid, Gas Measurement Skid, Potable Water Skid and the MCC building.



Delta House Topside



Production Module



Compression Module

## Engineering/Design:

Overall progress for Engineering Topsides through January is approximately 97% complete.

- Continuing Factory Acceptance Testing (FATs) and final inspections of major equipment packages.
- Ongoing reviews of Vendor Data Packages.
- Continued issuing P&ID's for construction. 100% of P&ID's have been issued Rev 0.
- Continued to issue Issued for Construction Isometric Drawings. To date, approximately 4484 out of 4484 (100%) (Revised estimated total) have been issued.
- Issuing Pipe Supports/Cable Tray Supports to Kiewit. Pipe supports are approximately 100% complete; Cable Tray Supports are approximately 100% complete.
- Incorporating vendor packages into the 3D model as they are received.
- Continued HMI/PLC development.
- Ongoing submittals / resolutions to DNV.
- Cable Tray MTO completed and Instrument Tubing Schedule completed.
- Instrument Location Plans issued.
- Comments issued for Operations Manual to Exmar
- Continuing Interfaces between Kiewit, Exmar, Pinnacle, and GATE.
- Electrical One Line Diagrams Issued.

## Procurement:

- Approximately 109 (revised total) Topsides Purchase Orders will be completed at the end of the project.
- 108 Purchase Orders (99%) have been issued (6 issued in January).
- One Request for Quotations (RFQ) is outstanding.
- One RFQ package is in Technical Development.

# Production Equipment Fabrication

Below is a snapshot of current activities that our inspectors are overseeing:

The Gas Pipeline Pig Launcher fabricated at **BS&B** is complete and has been shipped to Kiewit.

At **Integrated Flow Solutions**, assembly of the Glycol Regeneration Skid is in progress. All major equipment and components have been installed on the skid. Installation of interconnecting piping, valves, instrumentation, and electrical is in progress. Assembly of the Heat Media Skid is complete. The skid has been loaded out and shipped to Kiewit.

The Fuel Gas Skid has been shipped to Kiewit from **Moore Controls**.

At **Petrex**, all of the major components are installed on the Condensate Stabilizer Skid. All process piping and the fire water piping has been installed and tested. Next, I & E work and insulation of high heat vessels will take place.

Fabrication and hydro-test is complete on the Oil Pipeline Pig Launcher at **Piping Technologies**. The Launcher will be painted and shipped to Kiewit in the near future.



Condensate Stabilization Unit



## TOPSIDES

**Chemical Injection Module** – Arrived at Kiewit on 1/4/14 and was installed on Delta House facility.

**Hydraulic Power Unit (HPU) and Topsides Umbilical Termination Assembly (TUTA)** (Omega, Delivery: 3/7/14) – HPU panel work in progress. TUTA fabrication is complete.

**VK 817 Topsides** – Completed preliminary design of the launcher/receiver skid. Performed offshore site visit to review riser and launcher/receiver installation.

## SUBSEA

### **Pipeline & Riser**

- Export Line Pipe – All 12” and 16” export line pipe has been delivered to New Iberia.
- Pipe Coating, Insulation & End Boring (Bayou/Perma Pipe/Bevel Tech, Delivery: 4/18/14) – Bayou Pipe completed FBE coating on the 6” SCR pipe and began coating the 12” line pipe. Perma Pipe continued GSPU on the 6” line pipe. Bevel Tech continued counterboring on the 6” SCR pipe.
- Steel Catenary Risers (2D/RTI, Delivery: 6/30/14) – TSJ fabrication is ongoing, UT inspection of TSJ forgings is in progress. Heat treat of WPQ rings and fatigue test rings for steel forgings is complete. Performed field joint coating weld testing on the 6” and 8” flowlines. Acute to begin qualifying weld procedures the first week of February.
- VIV Strakes (AIMS, Delivery: 6/24/14) – Mold fabrication has commenced. Fabrication of the 6” and 8” strakes will begin in February, with fabrication of the 12” and 16” strakes beginning in March.
- Mobilized LLOG anchor handler, the “Joshua Chouest”, with ROV, survey and marine biologist to investigate possible chemosynthetic hits. Per biologist, the sites are clear.
- Ordering all miscellaneous subsea hardware including flanges (weldneck, swivel and misalignment ball), studs, nuts, and gaskets for riser sections, subsea assemblies and tie-in spools.

### **Manifolds, Jumpers and PLETs**

- Subsea Manifolds (Spitzer, Delivery: 5/10/14) – Fabrication of the subsea manifolds is in progress. They are currently fabricating mudmats, piping kits and support structures for all four manifolds.
- PLETs – Technip is finalizing PLET design and plans to award PLET fabrication to Omega.

### **Subsea Distribution**

- Umbilical Fabrication (Duco, Delivery: 8/30/14) – Ultra Deep continued detailed design and fatigue analysis.
- Subsea Controls – Currently working with FMC on software logic and programming. Steel flying lead fabrication began in late January.

**Pipeline & Riser Installation** (Technip, Completion: 10/15/14) – Technip continued weld qualification testing on the 8” pipe at their spoolbase in Mobile, AL. Held another riser pull-in meeting to finalize deck support steel. Fabricating turn down sheave pedestals at PESI, expected delivery is 2/8/14. Versabar submitted proposal for pull-in engineering, fabrication and rental.

**Export Pipelines** – BP issued award to Cal Dive for hot tap installation. Developing commissioning plans, including hydrotest and dewater. Working on net guard design to meet BP requirements.



TUTA